

Assessment of Physical Disability Using Barthel Index Scale Among Elderly of Rural Area

Aiza Fatima¹, Fayza Shareef¹, kamran Hanif Mazhar Ali Bhutto², Kashif Ali Sultan³, Muhammad Iqbal Javaid⁴

¹University Institute of Physical Therapy, University of Lahore, Lahore, Pakistan

²Department of Physiotherapy, School of Rehabilitation Sciences, Tehran University of Medical Sciences, Iran

³University of Health Sciences/ Allama Iqbal Medical College Lahore

⁴Gulab Devi Teaching Hospital, Lahore, Pakistan

*aiza.khan1993.ak@gmail.com

Highlights:

- Total 192 patients were included in the study
- Study was conducted for the assessment of physical disability using Barthel scale among elderly of rural area
- Barthel scale questionnaire was used for assessment
- 131(68.2%) patients were disable while, 61(31.8%) were non disable.

Abstract

Background and introduction:

The fitness of the elderly will be a central inconvenience characterizing the fitness status of a populace. There is more noteworthy need to investigate their substantial/physical handicap perspective. The objective was to evaluate the personal satisfaction of physically handicapped human by methods for utilizing Barthel Index (BI). The Barthel Scale is an ordinal scale used to gauge in general execution in exercises of every/day by day exercises (ADL).

Material and methods:

In this cross sectional study data was collected from different hospitals and clinics of Lahore division. Barthel index scale questionnaire was used in this study and the data was then analyzed using SPSS 21.

Result:

One hundred and ninety two sample size of affected person had been selected in the study from specific hospitals and clinics to determine the assessment of physical/functional disability by using Barthel Index. As our study indicates

the people of rural region are more bodily/physically disabled 68.2% with the mean age of 65.5 years.

Conclusion:

Physical Inability had influenced social support and it is major area of concern. More health services to be provided to elderly.

Key words:

Barthel Index, physical disability, elderly, activities of daily living

Introduction:

To being disabled or handicap isn't just a wellbeing bother or property of people, yet it shows troubles, individuals may likewise involvement in association with society and physical development. The word disability incorporates weakness, obstruction in performing activities intrigue repressions.⁽¹⁻³⁾ Decline in utilitarian portrays the loss of freedom in self-care activities (ADLs) or a worsening/impairment.⁽⁴⁻⁶⁾ The wellbeing of the elderly will be an essential issue characterizing the wellbeing status of a populace. There is more noteworthy need to investigate the physical handicap angles in matured number of people, which is generally disregarded.⁽³⁾ The Barthel Index (BI) is a regularly utilized proportion of autonomy or independence in the work to do of every day living. The scale was produced in 1965 and later on adjusted through Granger and association as a scoring strategy that will perform on the selected individuals and estimates the patient's execution in 10 activities

of day by day living.⁽⁴⁾ Activities of people focus at ensuring themselves and accomplishing freedom in everyday life.⁽⁴⁾ BI is foreteller of the treatment procedures and results (showering, dressing, gut and bladder care, use of bathroom, exchanges from one place to another, ambulation and climbing of stairs) and also depicts the patient's present status in personal care task. The aggregate score ranges from zero to twenty, with higher scores meaning better degrees of capacity.⁽⁵⁾ The Barthel Index (BI) is broadly used to decide qualification criteria for inpatient restoration, also to screen patients' recuperation, regardless of the sicknesses that influence them. The socially adjusted Italian variant of the Barthel Index (IcaBI) was as of late approved. BI is utilized to confirm patient's capability to get to these centers autonomous of their gauge conditions in Italy. This examination focused on the inpatient recuperation people all things considered. In Rome, IcaBI was managed to an associate of 264 individuals hospitalized in two healing centers. Furnishing care for patients with inward, neurological and orthopedic disease.⁽⁶⁾ Distinctive scales estimating ADLs are utilized in routine clinical practice to evaluate patient's engine and valuable autonomy/incapacity; the most widely utilized being the Barthel Index (BI). This scale was produced for ceaseless patients and long haul doctor's facility patients with neurological sickness inspecting their general execution when cure and predicting/foreseeing time required for engine restoration and measure of nursing help required.⁽⁷⁾ Exercises of ordinary living (ADL) are regular home-based activities or exercises that people lift out to keep up wellness and well-being. ADLs incorporate the capacity to: eat and drink unassisted, move, go to the toilet/bathroom, carry out personal cleanliness assignment, dress up unassisted, and groom. Stroke in elder people causes impairment-related utilitarian constraints that may end result in trouble taking an interest in ADLs impartial of supervision, heading, or

physical help.⁽⁸⁾ Basic therapeutic targets in recovery pharmaceutical are to decrease or diminish handicap. Measurement of practical independence in patients with handicaps is a fundamental segment of the rehabilitation technique and has an assortment of purpose both in persistent care and clinical research. Motivations behind such an evaluation are to give purpose and quantitative proportions of patient capacity, to screen changes in clinical status, Depict and impart levels of capacity in self-care and versatility abilities, to control administration choices, to keep further handicap, assess the treatment adequacy, foresee of visualization, to design position, decide the repayment and to evaluate care prerequisites. Barthel Index (BI) is a notable scale, among numerous accessible appraisal scales.⁽⁹⁾ Because of the scaling feature of the appraisal, patient's advancement can be observed and patients can additionally be thought about their physical wellbeing based on their scale rating.⁽¹⁰⁾ Universally adoption into clinical, research and routine practice, it's an ordinal scale that measures/assess the independence and dependence level for 10 activities of daily living (ADL) tasks.

Methods:

A cross sectional study was conducted on elderly population by using convenient sampling technique. Barthel index questionnaire was used to collect the data from different hospitals and clinics of Lahore division. The total sample size was 192 and was calculated using the online Epi Tools software (epitool.ausvet.com). Respondents who were 40 years and above and both male and female were included in the study, while mentally challenged and uncooperative were excluded. The data was analyzed using SPSS version 21. Statistical results were articulated as mean \pm standard deviation (S.D) for quantitative data and for qualitative data frequencies and proportions were used to check the outcomes of the study. Significant level was

set at P-value 0.05.

Result:

Total 192 sample size of patient were selected in the study from different hospitals and clinics to determine the assessment of physical disability using barthel index among elderly out of which 130 were male and 62 were female with the mean age 65.5 years.

Table 1: Frequency distribution of gender

Gender	Frequency	Percentage
Male	130	67.7
Female	62	32.3

Above table showed that according to the respondant patients 130(67.7%) were male and 62(32.3%) were female

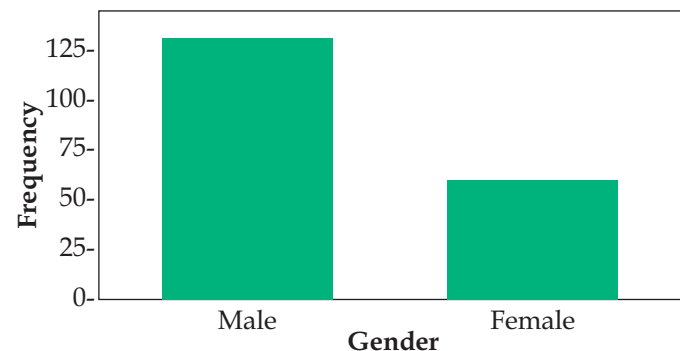


Table 2: Frequency distribution of categories of scores:

Status	Frequency	Percentage
Disable	131	68.2
Non Disable	61	31.8

Above table showed that 131(68.2%) patients were disable, while 61(31.8%) were non disable.

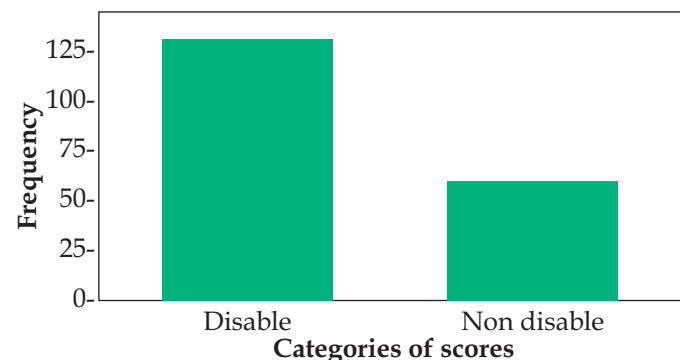
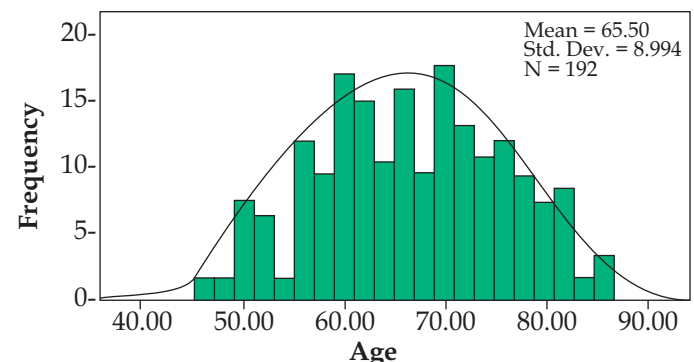
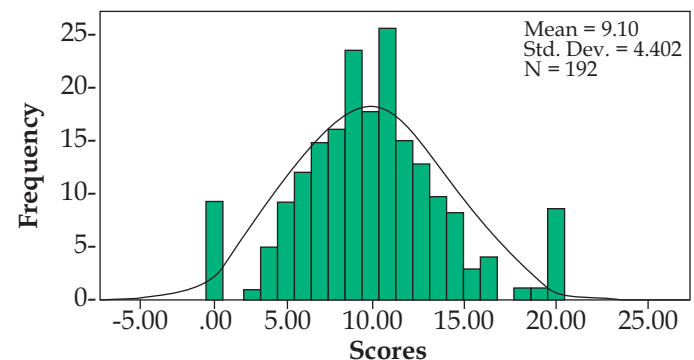


Table 3: Mean and standard deviation scores in statistical evaluations

Status	Age	Scores
Mean	65.5	9.0
Standard deviation	8.9	4.4
Minimum	45.0	0.0
Maximum	85.0	20.0

The mean age of selected patients was 65.5 years with the mean scores of 9.0

In the table mean, standard deviation, minimum and maximum of the main item is evaluated from the sample size of 192.



Discussion:

A community based cross sectional study was conducted from the different hospitals and clinics of Lahore district. The mean age of the selected patients was 65.5 years in which 130(67.7) were male and 62(32.3) were female elderly. Barthel Index questionnaire was used for the assessment of physical disability in elderly. Barthel Index has a score extending from 0-20 and it basically measures exercises of everyday life (ADL). In this study respondents were said to be functionally disabled, if the Barthel scale score was below 10. Score below 10 taken as some serious disability and respondents with the score above 10 were functionally

independent. In contrast to this Study Chakrabarty D found a community-based study from West Bengal using the Barthel scale, 16.16% elderly respondents were found to be functionally disabled.⁽¹¹⁾ In another study which was conducted from rural area of Tamil Nadu they reported a prevalence of functional disability of 22% using the same Barthel scale.⁽¹²⁾, while in this study ADL disability was way more 68.2% by using the same Index in the rural area. In contrast to this study Dr. Yves Guigoz conducted a study to find greater prevalence of severe functional disability among the elderly of rural area which is similar to our study findings.⁽¹³⁾ As our studies also shows that people of rural area are more physically disabled 68.2% as compared to the people of urban area, because people of the urban area have better to health care, possibilities of systematization support in the form of transportation, medical facilities, and better financial support. In our study assessment of quality of scores (QOL) was finished relation to sort of incapacity/disability, and QOL score was to be low. In another study quality of life of (QOL) was according to be at moderate level 79.3% which was conducted in two provinces of Thailand. In contrast to this study Noran N Hairi et.al. Investigated the useful/functional standing of older people of Malaysia and their findings are; their prevalence of functional limitation was 20%, and physical limitation by using 10 ADL items was 25%, their limitation increases with age. In their study, rural area of Malaysia, disability rates are as high as 25%, 37%, 52% which is almost similar to our findings.⁽¹⁴⁾

Conclusion:

The findings of this study shows very poor quality of life among people of rural area rather than urban domain. Their family members should play roles to prevent disability by providing them better care and facilities. We should provide them community health center or district hospitals. Researchers and primary care physician needs to consider cautiously study goals when measuring physical function in people with disabilities who were in the study

of disabilities and they should play their primarily role by using this scale to determine their ADL to increase their life expectancy.

Recommendations:

- The future investigations should be incorporate broadened or instrumental exercises or activities and superior mobility as segments of the essential result measure.
- Study was only limited to rural area of Lahore division so we suggest that there should be another study that includes different rural areas of different areas.
- Further studies are recommended with large sample size.
- Risk factors that lead to level of disability need to be studied.

Acknowledgment:

I would like to express my sincere gratitude to my supervisor Dr. Fayza Shareef without whose guidance, it would not have been possible to bring me to this topic. And I would like to thank my family for their support and encouragement.

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